

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Previously Presented) A data receiver for receiving user data and reference data coming from a transmitter via at least a channel, the data receiver, comprising:

means for unscrambling data;

means for despreading unscrambled data;

means for analyzing a characteristic of the channel;

a plurality of rake fingers of the data receiver, each rake finger comprising:

means for respectively evaluating the contribution of interferences of data caused by the channel; and

subtractor means for cancelling the contribution of interference in the user data for the rake finger, using the respectively evaluated interferences in each path of the rake finger, said subtractor means being placed before said unscrambling means.

2. (Previously Presented) The data receiver of claim 1, wherein the data are in compliance with the UMTS standard.

3. (Previously Presented) The data receiver of claim 2, wherein the reference data are provided by the CPICH channel.

4. (Previously Presented) A method for receiving user data and reference data coming from a transmitter via at least a channel which causes interference in the user data, the method comprising the steps of:

- analyzing the characteristic of the channel by using the reference data;
- determining an evaluation of the interferences of data provided in each path by the channel in each of a plurality of rake fingers;
- subtracting the evaluation of interference from the received user data in each of the plurality of rake fingers; and
- unscrambling the user data received via each of the plurality of rake fingers.

5. (Previously Presented) The method of claim 4, further comprising the steps of:

- adding a determined evaluation of each path in each of the plurality of rake fingers together to determine interference in the rake finger, wherein subtracting the evaluation of interference includes subtracting the determined interference in each of the plurality of rake fingers from user data processed via each of the plurality of rake fingers; and
- providing an output representing interference-corrected user data for unscrambling, and wherein unscrambling includes unscrambling the interference-corrected user data output.

6. (Previously Presented) The method of claim 4, wherein subtracting includes subtracting an interference evaluation within each of the plurality of rake fingers.

7. (Previously Presented) The method of claim 4, wherein respectively determining an evaluation of the interferences comprises separately determining an interference evaluation for each of a plurality of paths within each of the plurality of rake fingers, further comprising the steps of:

adding the separately-determined interference evaluations, and
wherein subtracting includes subtracting the added interference evaluations
from the received user data.

8. (Previously Presented) The data receiver of claim 1, wherein the means
for respectively evaluating the contribution of interferences further comprising:
an interference estimator for each path in the rake finger, each interference
estimator including a plurality of correlators and a correlator adder to add the output
of each correlator, and
an interference adder to add the output of the interference estimator for each
path; and
the subtracter means is coupled to receive an output from the interference
adder, adapted to subtract the output of the interference adder from the user data to
provide a subtracted user data output, and coupled to provide the subtracted user
data output to the means for unscrambling data.

9. (Cancelled)

10. (Previously Presented) The data receiver of claim 1, wherein the means
for respectively evaluating comprises a plurality of interference estimators
respectively allocated to a path in the plurality of rake fingers, and an adder to add
an output of the interference estimators; and
the subtracter means is located after the adder and adapted to receive and
use an output from the adder to subtract interference from user data processed via
the rake finger.

11. (Previously Presented) A rake receiver for processing a received data
signal, the rake receiver, comprising:
a plurality of rake fingers, each of the rake fingers comprising:

an interference estimator to determine the interference in the path;
an adder to add the determined path interferences from the
interference estimators;

a subtracter to subtract the added interferences from the received data
signal to provide a corrected output corresponding to the received data signal
with the interferences subtracted therefrom; and

an unscrambler to receive and unscramble the corrected output to
provide an unscrambled output;

a despreader to receive and despread the unscrambled output to provide a
despread output; and

a combiner to combine the despread output with outputs from others of the
plurality of rake fingers.

12. (Previously Presented) The rake receiver of claim 11, each of the
interference estimators, further comprises:

a plurality of correlators, each correlator adapted to generate an interference
estimate for all $j-1$ paths in the received data signal, where j is not equal to the path
of the finger in which the correlator is located; and

an adder to add the output of the plurality of correlators, and to provide the
output as the determined path interference for the interference estimator.

13. (Previously Presented) The rake receiver of claim 11, further comprising:
a conjugate device to evaluate the conjugate of a scrambling code for the
data signal, and

wherein the unscramble uses the evaluated conjugate to unscramble the
corrected output.

14. (Previously Presented) The rake receiver of claim 11, wherein each
interference estimator includes a plurality of correlators, the number of correlators

corresponding to the number of paths for the signal, the combined output of the correlators for a particular interference estimator providing the determined path interference for the particular interference estimator, at least one of the correlators comprising:

- a channel multiplier to multiply channel coefficients by a value of a channel symbol for the received data signal;

- scrambling multipliers $M(-N)$ and $M(+N)$ to multiply an output from the multiplier with a scrambling code of a parasitic link delayed in accordance with a delay of the link;

- operators $p(-N)$ to $p(+N)$ to operate on the output of the scrambling multipliers, where N corresponds to a number of interference coefficients p , each coefficient being generated by a cross-correlation of transmitting and receiving filters used for respectively transmitting and receiving the data signal; and

- an adder to sum the output of the scrambling multipliers as applied to the operators to provide the output of the correlator.